

70. (Amended twice) A method comprising:

joining a pre-oxidized elastomeric surface to a second pre-oxidized surface, wherein the elastomeric surface and the second surface form an irreversible liquid-impermeable seal therebetween in a microfluidic structure.

71. (Amended twice) A method as in claim 70, comprising joining the elastomeric surface and the second surface to form an irreversible liquid-impermeable seal therebetween in the absence of auxiliary adhesive.

72. (Amended) A method as in claim 70, further comprising pre-oxidizing the elastomeric surface and the second surface by exposing the elastomeric surface and the second surface to plasma.

75. (Amended) A method as in claim 70, wherein the joining step comprises joining first portions of the elastomeric surface to the second surface while leaving a second portion of the elastomeric surface, intervening the first portions of the elastomeric surface, free of contact with the second surface.

76. (Amended) A method as in claim 70, the joining step comprising contacting first portions of the second surface with the elastomeric surface while leaving a second portion of the second surface, intervening the first portions of the second surface, free of contact with the elastomeric surface.

90. (Amended twice) A method comprising:

applying an elastomeric surface to a second surface in the absence of auxiliary adhesive and at a temperature of between about 16 °C and about 27 °C, wherein the elastomeric surface and the second surface bond to form an irreversible liquid-impermeable seal therebetween in a microfluidic structure.

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